UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,568	01/24/2001	Steven Mastrianni	YOR920000800US1	3575

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HARRINGTON & SMITH, LLP	BRUCKART, BENJAMIN R	
4 RESEARCH DRIVE		
SHELTON, CT 06484-6212	ART UNIT	PAPER NUMBER
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DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 October 2004_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Claims 1-20 are pending in this Office Action.

The amendments to the specification page 17 and abstract are accepted.

Response to Arguments

Applicant's arguments filed in the amendment filed 10/8/04 have been fully considered

but they are not persuasive. The reasons are set forth below.

Applicant's invention as claimed:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 10, 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 10, 16 recite the limitations "most comprehensive" and "next most comprehensive". The limitations are vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-5, 10-11, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No 2002/0133573 by Matsuda et al.

Regarding claim 1, a computer implemented method for discovering data communication network configuration information (Matsuda: page 3, paragraphs 35-36), comprising steps of:
     invoking a network discovery function (Matsuda: page 3, paragraphs 35-36);
     executing the invoked network discovery function for examining the network using individual ones of a plurality of network configuration discovery protocols (Matsuda: page 3, paragraphs 34-36)
     that are executed sequentially in a hierarchical manner and organized so as to first execute a network configuration discovery protocol expected to provide most comprehensive network configuration information, followed by a network configuration discovery protocol expected to provide next most comprehensive network configuration information (Matsuda: page 3, para 34 shows two different protocols; page 4, para 41 shows a first and second discovery sequentially; page 5, para 46 does not limit discovery to dhcp; page 8, para 93-85 teaches service discovery through hyper text transfer protocol and service location protocol; Figure 6; page 6, paragraph 60; dhcp then dns is an order); and
     while executing the invoked network discovery function, building a list containing discovered network configuration information (Matsuda: page 3, paragraph 36).

Regarding claim 2, a method as in claim 1, wherein the plurality of network configuration discovery protocols comprise a set of protocols selected from a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34).

Regarding claim 4, a method as in claim 1, where building the list operates so as to not overwrite already discovered network configuration information (Matsuda: page 9, para 107; register new NOA service and add to list, maintained on server).

Regarding claim 5, a method as in claim 1, wherein the plurality of network configuration discovery protocols are executed in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34).

Regarding claim 10, a digital data storage media that is readable by a computer and that stores a software program that implements a process for discovering data communication network configuration information (Matsuda: page 3, para 30-31), the software program causing the computer to operate so as to invoke a network discovery function (Matsuda: page 3, para 35-36), to execute the invoked network discovery function to examine the network using individual ones of a plurality of network configuration discovery protocols (Matsuda: page 3, para 34-36) that are executed sequentially in a hierarchical manner and organized so as to first execute a network configuration discovery protocol expected to provide most comprehensive network configuration information, followed by a network configuration discovery protocol expected to provide next most comprehensive network configuration information (Matsuda: page 3, para 34 shows two different protocols; page 4, para 41 shows a first and second discovery sequentially; page 5, para 46 does not limit discovery to dhcp; page 8, para 93-85 teaches service discovery through hyper text transfer protocol and service location protocol; Figure 6; page 6, paragraph 60; dhcp then dns is an order) and, during the network examination, to build a list containing discovered network configuration information (Matsuda: page 3, para 36).

Regarding claim 11, a digital data storage media as claimed in claim 10, wherein the plurality of network configuration discovery protocols comprise a set of protocols selected from a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name

Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34).

Regarding claim 13, a digital data storage media as claimed in claim 10, wherein the computer executes individual ones of the plurality of network configuration discovery protocols sequentially in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34) Figure 6; page 6, paragraph 60; dhcp then dns is an order).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0133573 by Matsuda et al in view of U.S. Patent No. 5,937,162 by Funk et al.

Claims 6-9, 14-17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0133573 by Matsuda et al in view of U.S. Patent No. 5,128,926 by Perlman et al.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0133573 by Matsuda et al in view of U.S. Patent No. 5,128,926 by Perlman et al in further view of U.S. Patent No. 5,937,162 by Funk et al.

Regarding claim 3,
        The Matsuda reference teaches a method as in claim 2, for discovering network configuration information with DNS protocols.
        The Matsuda reference does not explicitly state using specific DNS protocols.
        The Funk reference teaches discovering network configuration information through DNS wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS MX Record protocol (Funk: col. 2, lines 46-51; col. 11, lines 64- col. 12, line 6), a DNS Start of Authority Protocol, a DNA NS protocol and a DNS PTR protocol.
        The Funk reference further teaches by relieving the queues of the responsibility of querying the Internet DNS, and by querying the Internet ahead of the scheduled e-mail delivery time the DNS server speeds message delivery (Funk: col. 12, lines 6-11).
        Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to use DNS protocols to discover network configuration information as taught by Matsuda while employing DNS MX Record protocol as taught by Funk in order to speed up message delivery (Funk: col. 12, lines 6-11).

Regarding claim 12,

The Matsuda reference teaches the digital data storage media as claimed in claim 11, for discovering network configuration information with DNS protocols.

The Matsuda reference does not explicitly state using specific DNS protocols.

The Funk reference teaches discovering network configuration information with DNS wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS MX Record protocol (Funk: col. 2, lines 46-51; col. 11, lines 64- col. 12, line 6), a DNS Start of Authority Protocol, a DNA NS protocol and a DNS PTR protocol.

The Funk reference further teaches by relieving the queues of the responsibility of querying the Internet DNS, and by querying the Internet ahead of the scheduled e-mail delivery time the DNS server speeds message delivery (Funk: col. 12, lines 6-11).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to use protocols to discover network configuration information as taught by Matsuda while employing DNS MX Record protocol as taught by Funk in order to speed up message delivery (Funk: col. 12, lines 6-11).

Regarding claim 6,

The Matsuda reference teaches a method as in claim 1, wherein a list containing discovered network configuration information is stored.

The Matsuda reference does not explicitly state storing the list in a database but does talk about a distributed database.

The Perlman reference teaches a list stored as a location object in a persistent database (Perlman: col. 4, lines 29-41).

The Perlman reference further teaches using link state packets and complete number sequences to update their databases while reducing the probability of errors and computational burden on routers (Perlman: col. 3, lines 8-25).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create a list of discovered network configuration information as taught by Matsuda while storing it in a database as taught by Perlman in order to reduce the probability of errors and computation burden on routers while updating databases (Perlman: col. 3, lines 8-25).

Claims 7-9 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Perlman et al and Matsuda et al.

Regarding claim 7, a method as in claim 6, wherein a location object is imported into the persistent database (Perlman: col. 7, lines 23-31), or exported from the persistent database (Perlman: col. 6, lines 40-51; removed or col. 5, lines 41-63).

Regarding claim 8, a method as in claim 6, wherein a location object is exported from the persistent database (Perlman: col. 5, lines 41-63), and made available to be imported into another persistent database (Perlman: col. 6, lines 7-34).

Regarding claim 9, a method as in claim 6, wherein an application program queries the persistent database for a location object, and uses the network configuration information stored in the location object while connected to a network from which the location object was derived (Perlman: col. 6. lines 15-18; col. 10, lines 49-63; cost; col. 1, lines 20-30).

Regarding claim 14,

The Matsuda reference teaches the digital data storage media as claimed in claim 10, for discovering network configuration information and building a a list containing discovered network configuration information is stored.

The Matsuda reference does not explicitly state storing the list in a database but does talk about a distributed database.

The Perlman reference teaches wherein the computer causes the list to be stored as a location object in a persistent database (Perlman: col. 4, lines 29-41), wherein a location object may be imported into the persistent database (Perlman: col. 7, lines 23-31), or exported from the persistent database (Perlman: col. 5, lines 41-63), and wherein a location object may be exported from the persistent database and made available to be imported into another persistent database (Perlman: col. 6, lines 7-34).

The Perlman reference further teaches using link state packets and complete number sequences to update their databases while reducing the probability of errors and computational burden on routers (Perlman: col. 3, lines 8-25).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create a list of discovered network configuration information as taught by Matsuda while storing it in a database as taught by Perlman in order to reduce the probability of errors and computation burden on routers while updating databases (Perlman: col. 3, lines 8-25).

Claim 15 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Perlman et al and Matsuda et al.

Regarding claim 15, a digital data storage media as claimed in claim 14, wherein the computer operates to respond to an application program that queries the persistent database for a location object, to return the location object to the application for use by the application while connected to a network from which the location object was derived (Perlman: col. 6. lines 15-18; col. 10, lines 49-63; cost; col. 1, lines 20-30).

Regarding claim 16,

The Matsuda reference teaches a digital data processing system comprising a data processor, a memory, and at least one network adapter for attaching the data processor to a data communication network (Matsuda: page 3, para 31-32), said memory storing a software program that controls said data processor for discovering data communication network configuration information by examining the network using individual ones of a plurality of network configuration discovery protocols (Matsuda: page 3, para 34-36) that are executed sequentially in a hierarchical manner and organized so as to first execute a network configuration discovery protocol expected to provide most comprehensive network configuration information, followed by a network configuration discovery protocol expected to provide next most comprehensive network configuration information (Matsuda: page 3, para 34 shows two different protocols; page 4, para 41 shows a first and second discovery sequentially; page 5, para 46 does not limit discovery to dhcp; page 8, para 93-85 teaches service discovery through hyper text transfer protocol and service location protocol; Figure 6; page 6, paragraph 60; dhcp then dns is an order) and, during the network examination, said location object containing discovered network configuration information for use by an application while attached to the network (Matsuda: page 3, paragraph 36).

The Matsuda reference teaches the memory but does not explicitly state a database.

The Perlman reference teaches storing a location object in a persistent database portion of memory (Perlman: col. 4, lines 29-41).

The Perlman reference further teaches using link state packets and complete number sequences to update their databases while reducing the probability of errors and computational burden on routers (Perlman: col. 3, lines 8-25).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create a list of discovered network configuration information as taught by Matsuda while storing it in a database as taught by Perlman in order to reduce the probability of errors and computation burden on routers while updating databases (Perlman: col. 3, lines 8-25).

Claim 17, 19-20 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Perlman et al and Matsuda et al.

Regarding claim 17, a digital data processing system as claimed in claim 16, wherein the plurality of network configuration discovery protocols comprise a set of protocols selected from a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34).

Regarding claim 19, a digital data processing system as claimed in claim 16, wherein the data processor is controlled to execute individual ones of the plurality of network configuration discovery protocols sequentially in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP) (Matsuda: page 8, paragraph 85), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols (Matsuda: page 3, paragraph 34), and a Dynamic Host Configuration Protocol (DHCP) (Matsuda: page 3, paragraph 34) Figure 6; page 6, paragraph 60; dhcp then dns is an order).

Regarding claim 20, a digital data processing system as claimed in claim 16, wherein a location object is imported into the persistent database (Perlman: col. 7, lines 23-31), or exported from the persistent database (Perlman: col. 5, lines 41-63), and wherein a location object may be exported from the persistent database and made available to be imported into another persistent database (Perlman: col. 6, lines 7-34).

Regarding claim 18,
        The Matsuda and Perlman references teach a digital data processing system as claimed in claim 17 for discovering network resources and storing them in a database.
        The Matsuda and Perlman references do not explicitly state DNS protocol specifics.
        The Funk reference teaches wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS Mx Record protocol (Funk: col. 2, lines 46-51; col. 11, lines 64- col. 12, line 6), a DNS Start of Authority Protocol, a DNA NS protocol and a DNS PTR protocol.
        The Funk reference further teaches by relieving the queues of the responsibility of querying the Internet DNS, and by querying the Internet ahead of the scheduled e-mail delivery time the DNS server speeds message delivery (Funk: col. 12, lines 6-11).
        Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to use protocols to discover network configuration information as taught by Matsuda and Perlman while employing DNS MX Record protocol as taught by Funk in order to speed up message delivery (Funk: col. 12, lines 6-11).

REMARKS

The Applicant Argues:

        Applicant argues the amendment overcomes the 102(e) rejection of Matsuda et al (U.S. Publication No. 2002/0133573).

        In response, the examiner respectfully submits:

        The Matsuda reference is still prior art not distinguished by applicant's amendment. Applicant's amendment does further detail the independent claim but is vague and indefinite. Matsuda anticipated the amendment by detailing page 3, para 34 showing two different protocols, dns services and dhcp as further detailed in applicants claim 2. Page 4, para 41 shows a first and second discovery sequentially, the device starts up sending out discovery messages. If the device declines the configuration information, the device then sends out another discovery message. Page 5, para 46 does not limit discovery to dhcp. Page 8, para 93-85 teaches service discovery through hyper text transfer protocol and service location protocol giving two more

different protocols used for service discovery. Figure 6 shows the steps in which two discovery protocols are started in separate steps, tags 608, 610, page 6, paragraph 60; dhcp then dns is an order. The examine has tried best to understand applicant's further distinction but given the breadth of the claim language, the Matsuda reference still applies as prior art.

Claims 2 and 11 are rejected under Matsuda. Applicant argues the Salutation protocol and LDAP protocols are not stated in Matsuda.

In response, the examiner respectfully submits:

Applicant's claim language "network configuration protocols comprise a set of protocols selected from" (Emphasis Added), leaves interpretation that the protocols can be any of the protocols listed. Because 2 of the 4 protocols are explicitly state, the limitation is met. Further because they are discovery protocols, they would be equated to other related discovery protocol has a breadth rejection.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U. S. Patent No. 6,430,613 by Brunet teaches a network management system with a manager to utilize a first and second protocol sequentially for network information.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Benjamin R Bruckart whose telephone number is (571) 272-

3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155
brb
2-10-05

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER